NIH NATIONAL CANCER INSTITUTE

BIOMARKERS FOR CANCER PATIENTS TREATED WITH CANCER VACCINES

SUMMARY

The National Cancer Institute's Chemical Biology Laboratory seeks parties to license or co-develop a diagnostic tool that identifies serum biomarkers of cancer targeting carbohydrate antigens.

REFERENCE NUMBER

E-234-2010

PRODUCT TYPE

- Diagnostics
- Research Materials

KEYWORDS

- Carbohydrate
- Glycan
- Glycoprotein
- Antigen
- Vaccine

COLLABORATION OPPORTUNITY

This invention is available for licensing and co-development.

CONTACT

John D. Hewes
NCI - National Cancer Institute
240-276-5515

John.Hewes@nih.gov

DESCRIPTION OF TECHNOLOGY

Although antibodies are a critical element of the immune response, the role of antibody responses in cancer vaccines is still unknown. Carbohydrate antigens, which are directly or indirectly involved in most types of cancer vaccines, are a class of antigens that has been largely understudied but play a significant role in the immune response of cancer vaccines.

This invention involves the identification of serum biomarkers for cancer that target carbohydrate antigens. The biomarkers are specific sub-populations of serum antibodies present in the serum of patients that bind to various glycan and/or glycoprotein antigens, such as the Forssman antigen. This technology can be developed into a pioneering test, as no such test to monitor prognosis and efficacy of cancer vaccines currently exists in the market.

Clinical data has been obtained; validation studies are ongoing, preliminary results confirmed in two independent patient groups.

POTENTIAL COMMERCIAL APPLICATIONS

- Diagnostic and prognostic test to monitor the progression and long-term survival of cancer patients
- Predictive indicator of cancer patient's immune response to a cancer vaccine
- Indicator to monitor the efficacy of a cancer vaccine

COMPETITIVE ADVANTAGES

- First diagnostic tool of its kind to monitor prognosis and efficacy of cancer vaccines.

INVENTOR(S)

- Jeff Gildersleeve, PhD (NCI)

DEVELOPMENT STAGE

- Clinical

PUBLICATIONS

Gildersleeve JC, et al., PMID: 23063402

PATENT STATUS

- **U.S. Filed:** U.S. Application No. 61/443,955 filed 02/17/2011
- **Foreign Filed:** Pending: Australian Patent No. 2011285534 and European Patent No. 11749629.9

THERAPEUTIC AREA

- Cancer/Neoplasm